



Value-Based Health Care Delivery: Core Concepts

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Harvard Business School

Value-Based Innovation Summit
Cleveland, OH
Tuesday, October 22, 2019

This presentation draws heavily on Professor Porter's research in health care delivery including Redefining Health Care (with Elizabeth Teisberg), What is Value in Health Care, NEJM, and The Strategy That Will Fix Health Care, HBR (with Thomas Lee). A fuller bibliography is attached. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means — electronic, mechanical, photocopying, recording, or otherwise — without the permission of Michael E. Porter. For further background and references on value-based health care, see the website of the Institute for Strategy and Competitiveness.

Disclosure

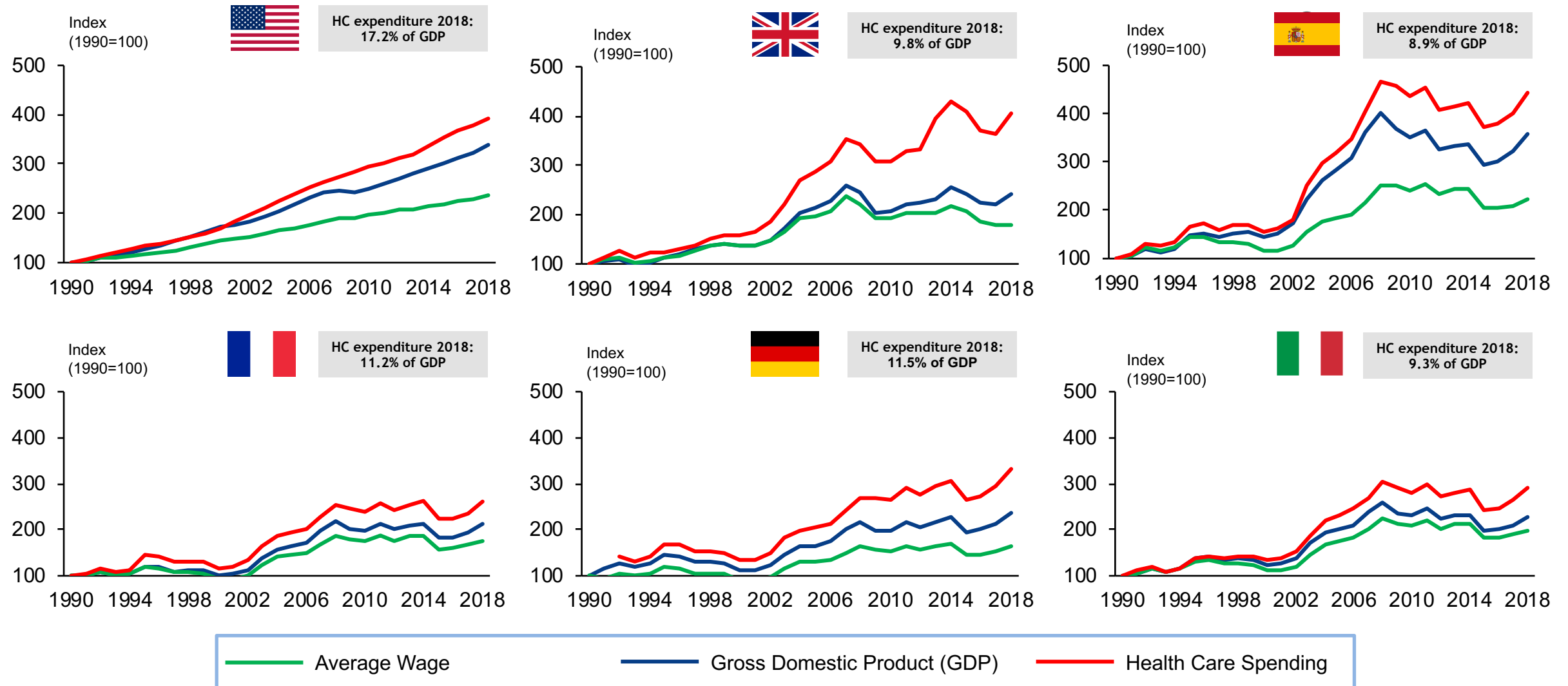
Michael Porter

I have a relevant financial relationship with the following companies:

<u>Company</u>	<u>Role</u>
Allscripts	Advisor
AZTherapies	Advisor, Investor
American College of Surgeons	Speaker, Honorarium
Ascent Biomedical Ventures	Investor
Biopharma Credit Investments	Investor
Advanced Aesthetic Tech.	Investor
Merck & Co.	Investor
Merrimack Pharmaceuticals	Former Board Member, Investor
Molina Healthcare	Advisor, Investor
Royalty Pharma	Investor
Thermo Fisher Scientific	Former Board Member, Investor

Health Care Problem Remains a Global Issue

Health Care Spending vs GDP and Income



Incremental “Solutions” Have Had Limited Impact

- Evidence-based medicine
- Accountability for process metrics
- Safety/eliminating errors
- Prior authorization
- Patients as paying customers
- Electronic medical records
- “Lean” process improvements
- Care coordinators
- Retail clinics / urgent care
- Programs to address high cost areas
- Mergers and consolidation
- Personalized medicine
- Population health
- Analytics and big data



Restructuring health care delivery is needed, not incremental improvements

Solving the Health Care Problem

- The fundamental **goal and purpose** of health care is to deliver high and rising **value for patients**

$$\text{Value} = \frac{\text{Health outcomes that matter to patients}}{\text{Costs of delivering these outcomes}}$$

- Delivering high value health care is the **definition of success**
- Value is the only goal that can **unite the interests** of all system participants
- Improving value is the **only real solution** to reducing the burden of health care on citizens and governments



- The questions are how to design a health care delivery system that **substantially improves patient value**, and to shift competition to **competing on value**

Creating a Value-Based Health Care Delivery System

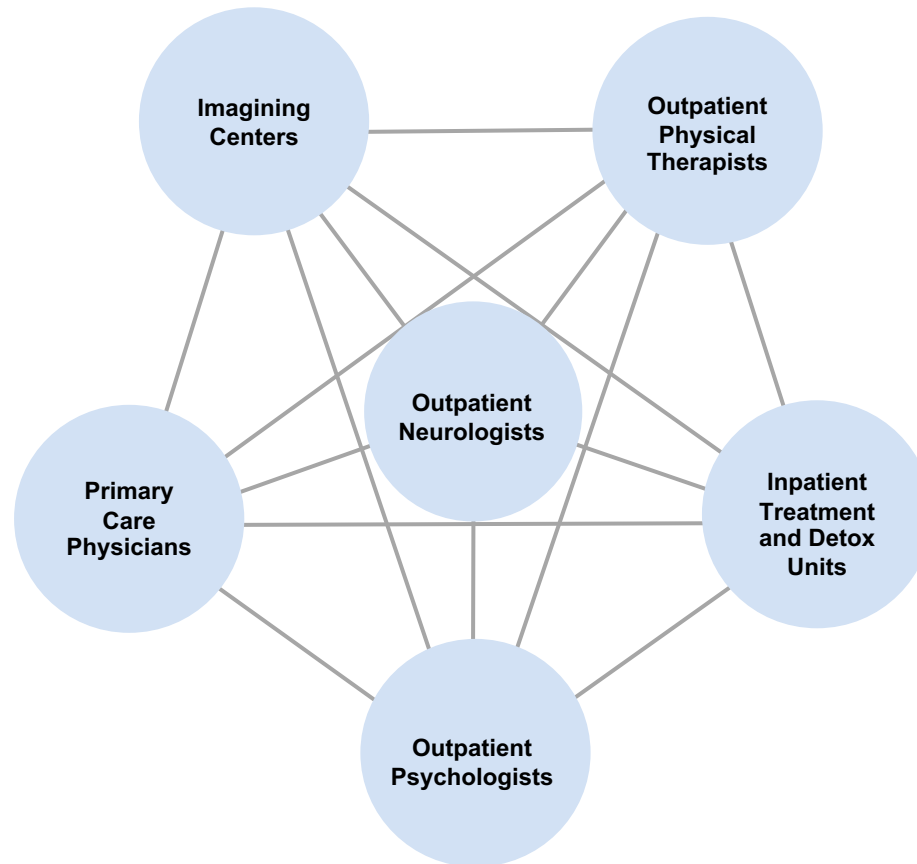
The Strategic Agenda

1. Re-organize care around patient conditions (groups of related conditions) into **integrated practice units (IPUs)**, covering the full cycle of care
 - For primary and preventive care, IPUs should serve **distinct patient segments**
2. Measure **outcomes** and **costs** for every patient, in the line of care
3. Move to value-based reimbursement models, and ultimately **bundled payments** for conditions
4. **Integrate** and **coordinate** care in multi-site care delivery systems
5. Expand or affiliate **across geography** to reinforce excellence
6. Build an enabling **information technology platform**

Re-organize Care Around Patient Medical Conditions

Headache Care in Germany

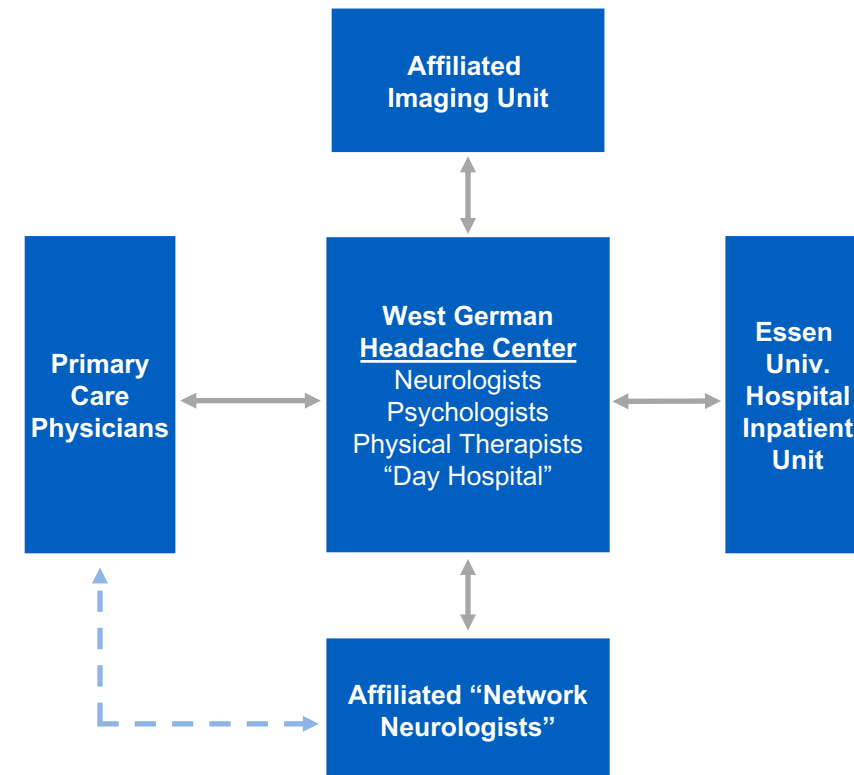
Organize by department, specialty,
and discrete service



Care by Individuals



Organize around the patient's condition, or
family of related conditions, over the full care
cycle into an Integrated Practice Unit (IPU)



Care by a Team



Value-Based Primary Care

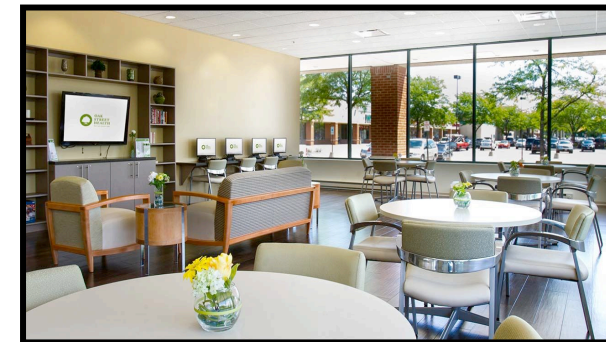
Oak Street Health



- Patient segment: **older adults with lower-income**, living in **under-served** urban communities
- Co-located in **dedicated facilities**
- **Explicit processes to engage** patients, address social and economic determinants of health, and provide free rides/home-visits, in-house pharmacy and selected events for community residents
- **Selected in-house services** in the most relevant specialties for this patient segment such as behavioral health and podiatry and **close relationships with outside specialists**
- **Meet daily and weekly** to discuss each patient's care plans, and process improvement
- **Measurement and accountability** for outcomes, cost, and patient experience



- **Single full-risk value-based payment** covering overall care
 - Including specialty and post-acute care
 - Medicare Advantage



The Playbook for Integrated Practice Units (IPUs)

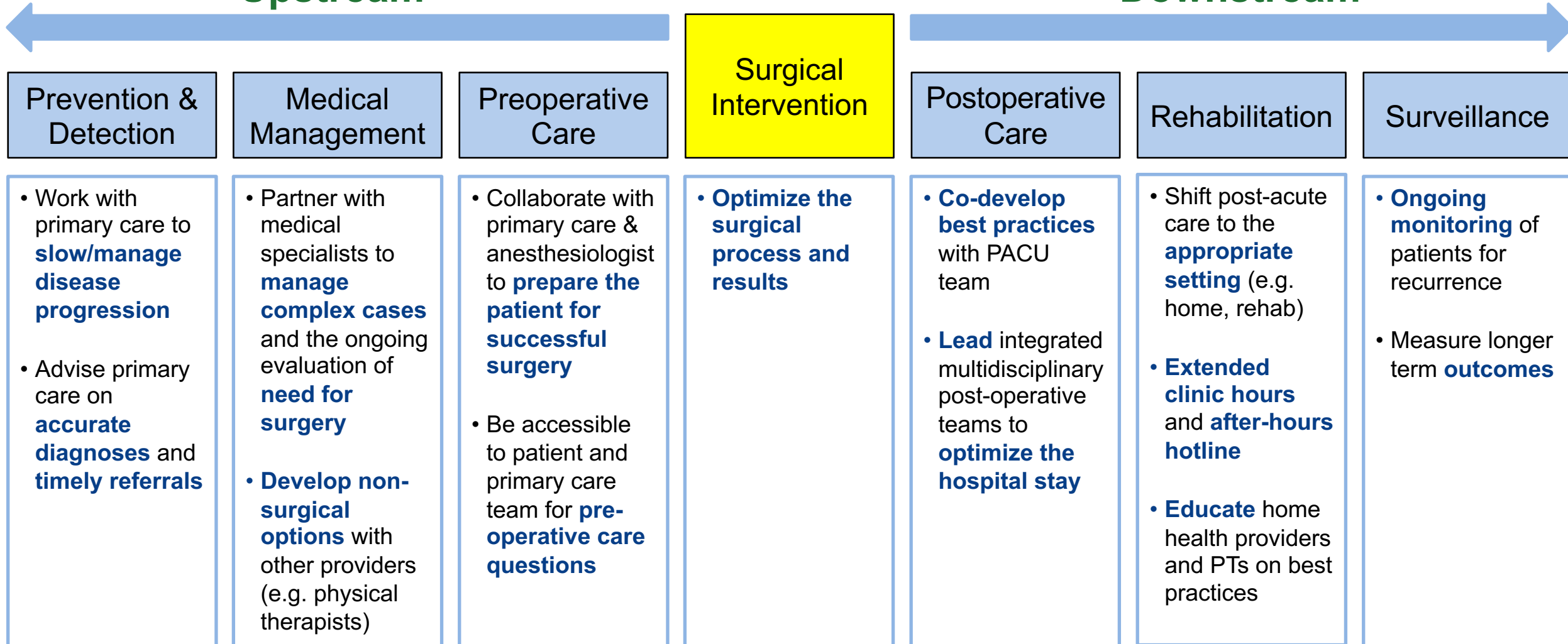
1. Organized around a **medical condition**, or **groups of closely related conditions**.
2. Care is delivered by a **dedicated, multidisciplinary team** devoting a significant portion of their time to the condition
 - Involved dedicated staff and affiliated staff with strong working relationships
3. **Co-located** in **dedicated facilities**.
4. Takes responsibility for the **full cycle of care**
5. A **hub and spoke** structure with that allocates care to the right site
6. Addressing common complications and comorbidities, as well as **patient education, engagement, adherence, follow-up**, and **prevention** are integrated into the care process
7. The IPU has a clear **clinical leader**, a common **scheduling and intake process**, and a unified **financial structure** (single P + L)
8. A **physician team captain, clinical care manager** or both oversees each patient's care
9. The IPU **routinely measures** outcomes, costs, care processes, and patient experience using a **common platform**
10. The team **accepts joint accountability** for outcomes and costs
11. The team **regularly meets formally and informally** to discuss individual patient care plans, process improvements, and how to improve results.

Integrating Across the Care Cycle

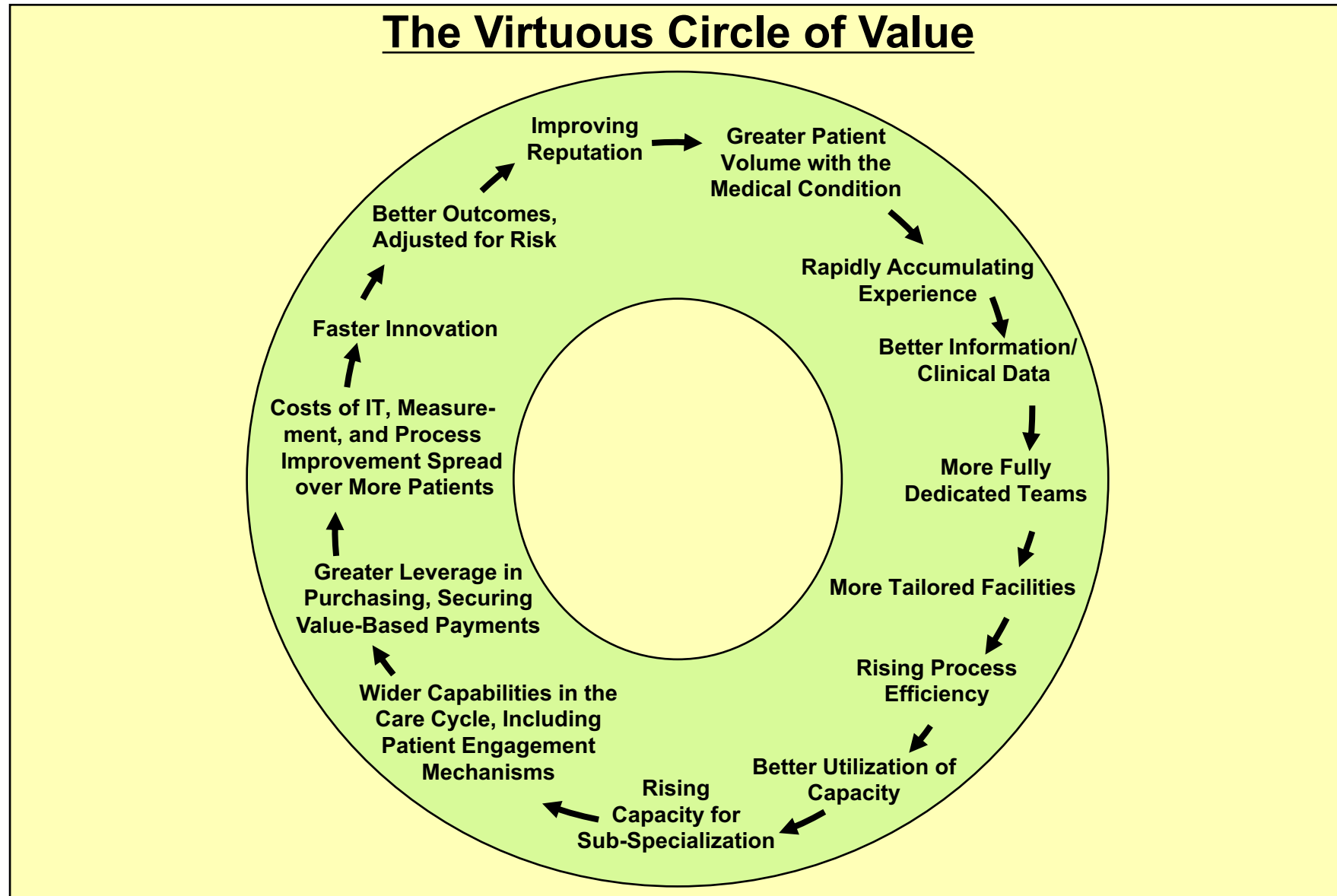
Role of Surgeons Beyond the Operating Room

Upstream

Downstream

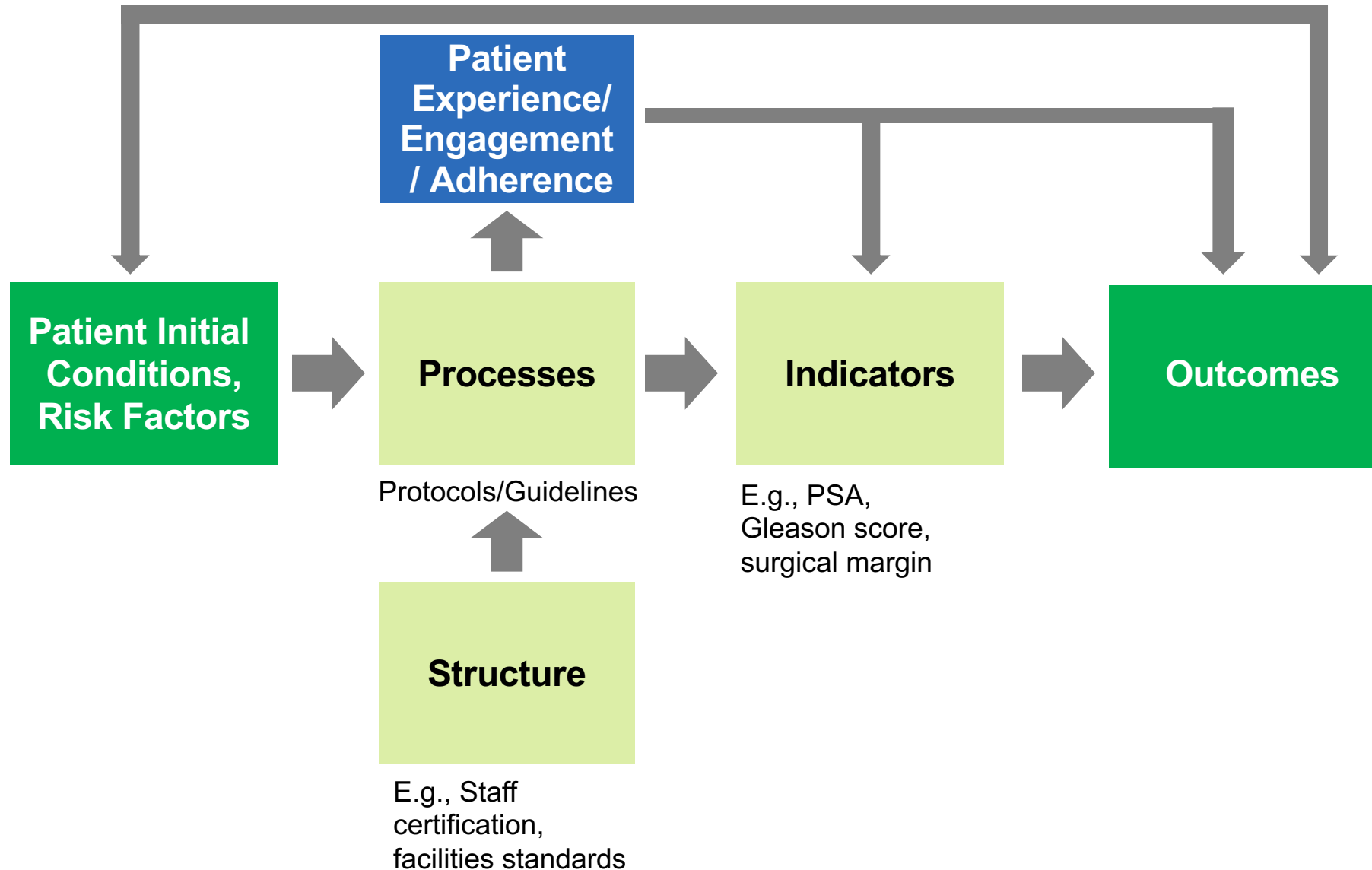


IPU Volume Enhances Value



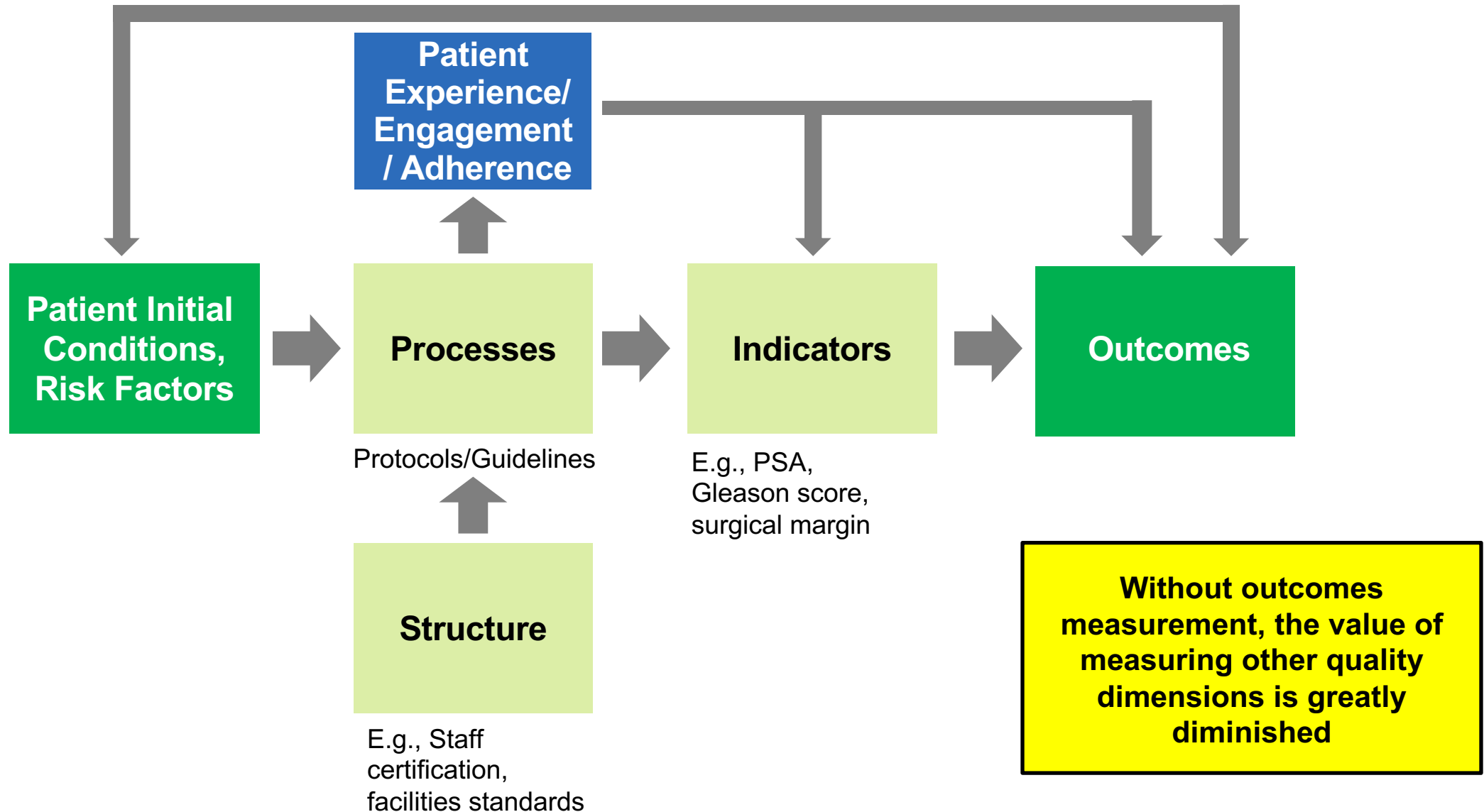
Measure Outcomes for Every Patient

The Quality Measurement Landscape




Measure Outcomes for Every Patient

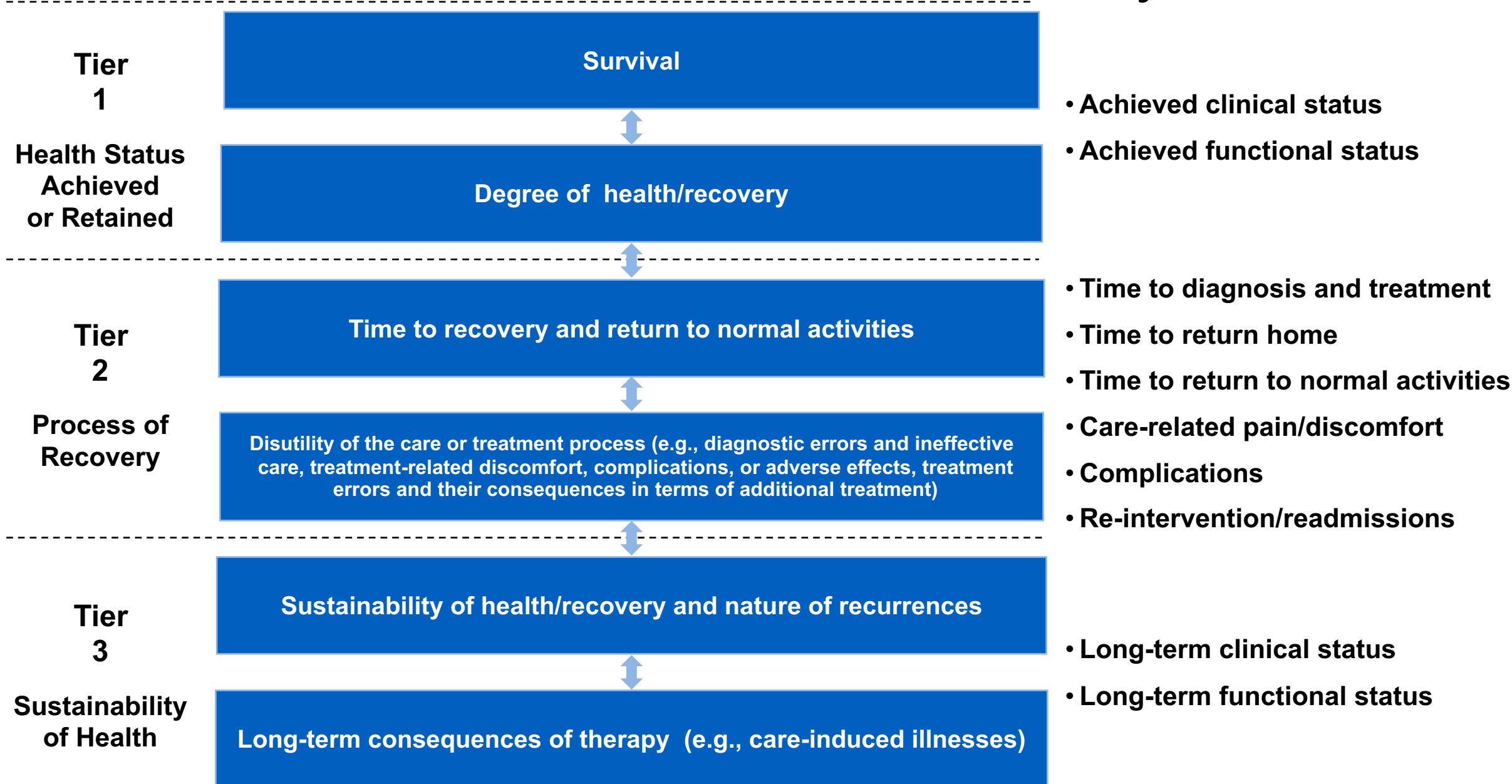
The Quality Measurement Landscape



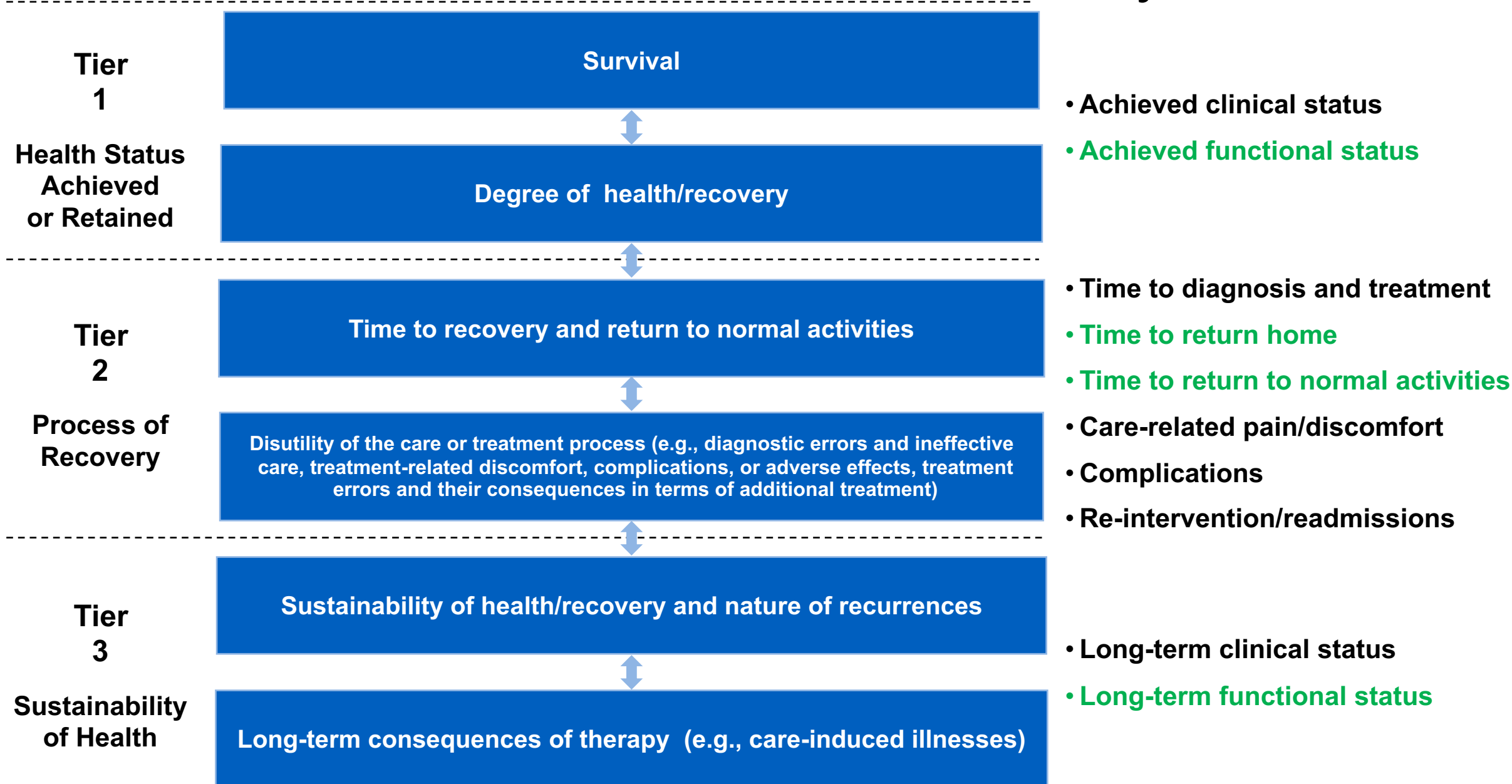
Principles of Outcome Measurement

- Outcomes should be measured by **condition** or **primary care segment**
 - **Not** for specialties, procedures, or interventions
 - Outcomes cover the **full cycle of care**
 - Outcomes are **always multi-dimensional** and include what matters most to **patients (and families)**, not just to clinicians
 - **Patient reported outcomes** are important in every condition
 - Outcome measurement includes **initial conditions/risk factors** to control for patient differences
 - Outcomes should be **standardized** for each condition, to maximize comparison, learning, and improvement
 - Outcomes should be measured in the **line of care**
- 
- Value-based measurement differs from the **historical focus** on measuring **provider behavior** and **overall patient success**

The Outcome Measures Hierarchy

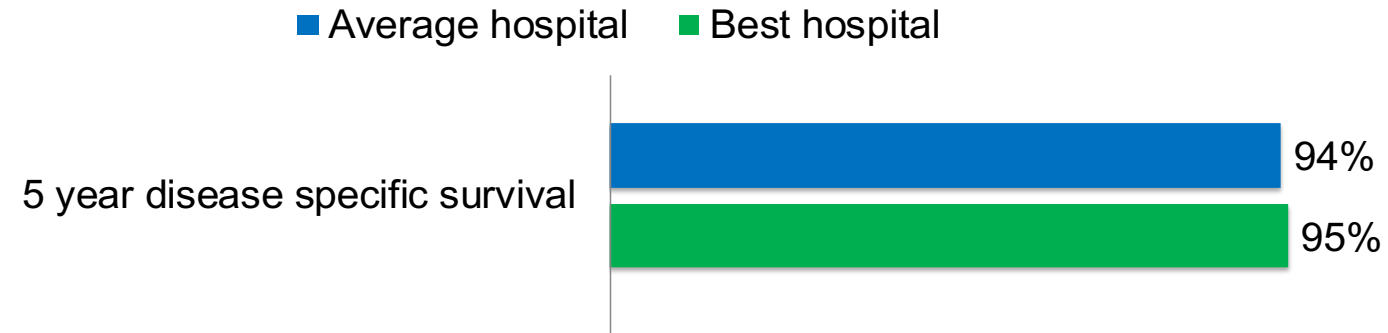


The Outcome Measures Hierarchy



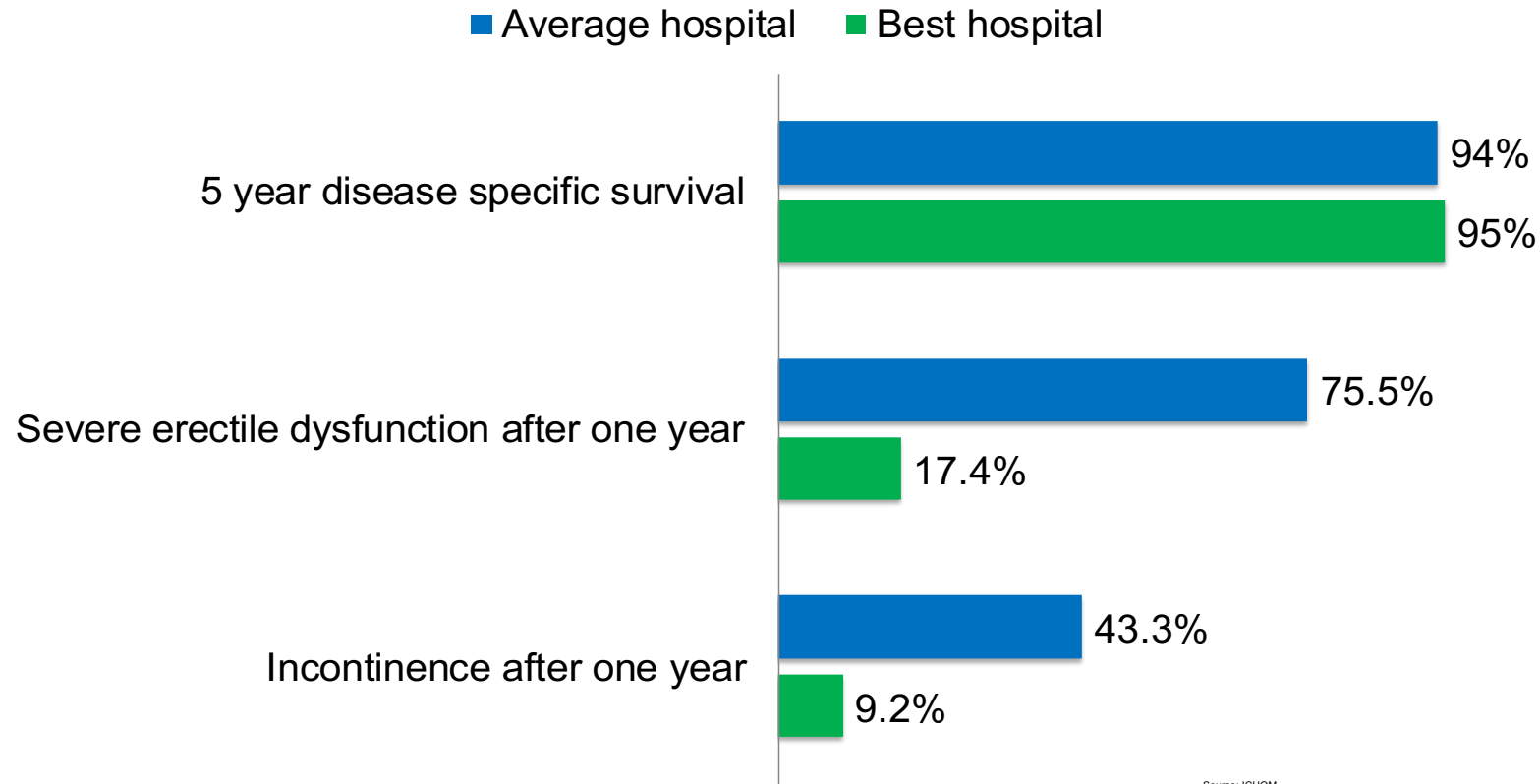
Measuring Multiple Outcomes

Prostate Cancer Care in Germany



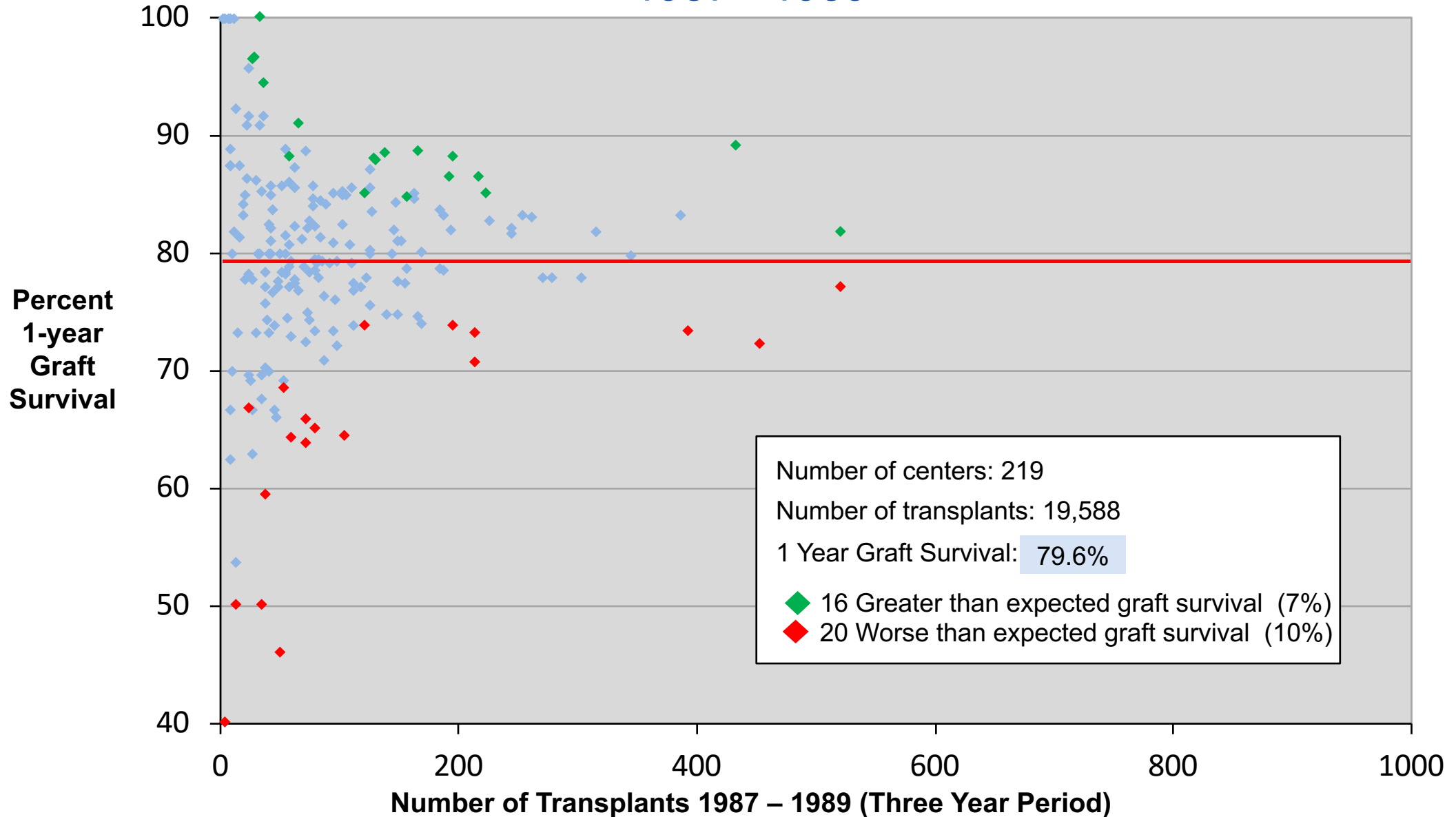
Measuring Multiple Outcomes

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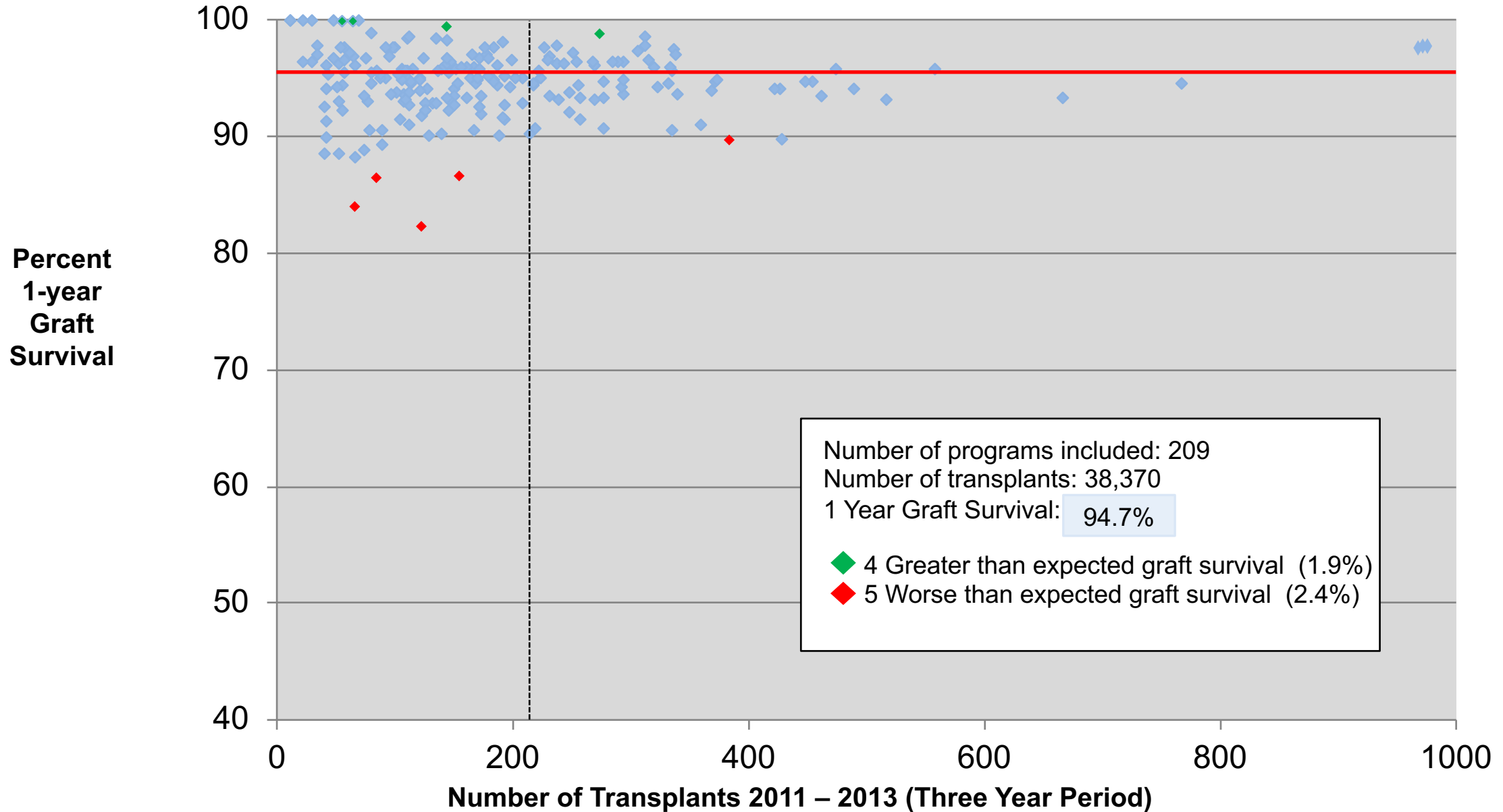
Adult Kidney Transplant Outcomes

1987 - 1989



Adult Kidney Transplant Outcomes

2011 - 2013



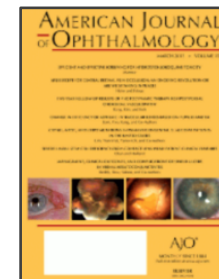
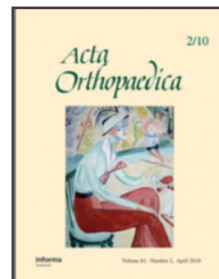
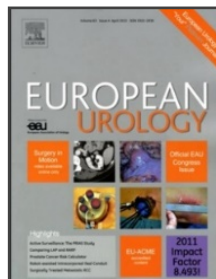
Standardizing Outcome Sets

ICHOM




Completed Standard Sets (2013-14)	Completed Standard Sets (2015-16)	Completed Standard Sets (2017-19)	Committed/ In Process
<ol style="list-style-type: none"> 1. Localized Prostate Cancer * 2. Lower Back Pain * 3. Coronary Artery Disease * 4. Cataracts * 5. Parkinson's Disease * 6. Cleft Lip and Palate * 7. Stroke * 8. Hip and Knee Osteoarthritis * 9. Macular Degeneration * 10. Lung Cancer * 11. Depression and Anxiety * 12. Advanced Prostate Cancer * 	<ol style="list-style-type: none"> 13. Breast Cancer * 14. Dementia 15. Frail Elderly 16. Heart Failure 17. Pregnancy and Childbirth 18. Colorectal Cancer * 19. Overactive Bladder 20. Craniofacial Microsomia 21. Inflammatory Bowel Disease * 	<ol style="list-style-type: none"> 22. Chronic Kidney Disease * 23. Congenital Upper Limb Malformations 24. Pediatric Facial Palsy * 25. Inflammatory Arthritis * 26. Hypertension * 27. Oral Health 28. Diabetes 29. Atrial Fibrillation 	<ol style="list-style-type: none"> 30. Overall Adult Health 31. Pediatric Health 32. Hand and Wrist 33. Neonates 34. Congenital Heart Disease 35. Depression and Anxiety in Children and Young People 36. Psychotic Disorders 37. Personality Disorders 38. Substance Misuse 39. Autism Spectrum Disorder

* Published Thus Far
in Peer-Reviewed
Journals (19)



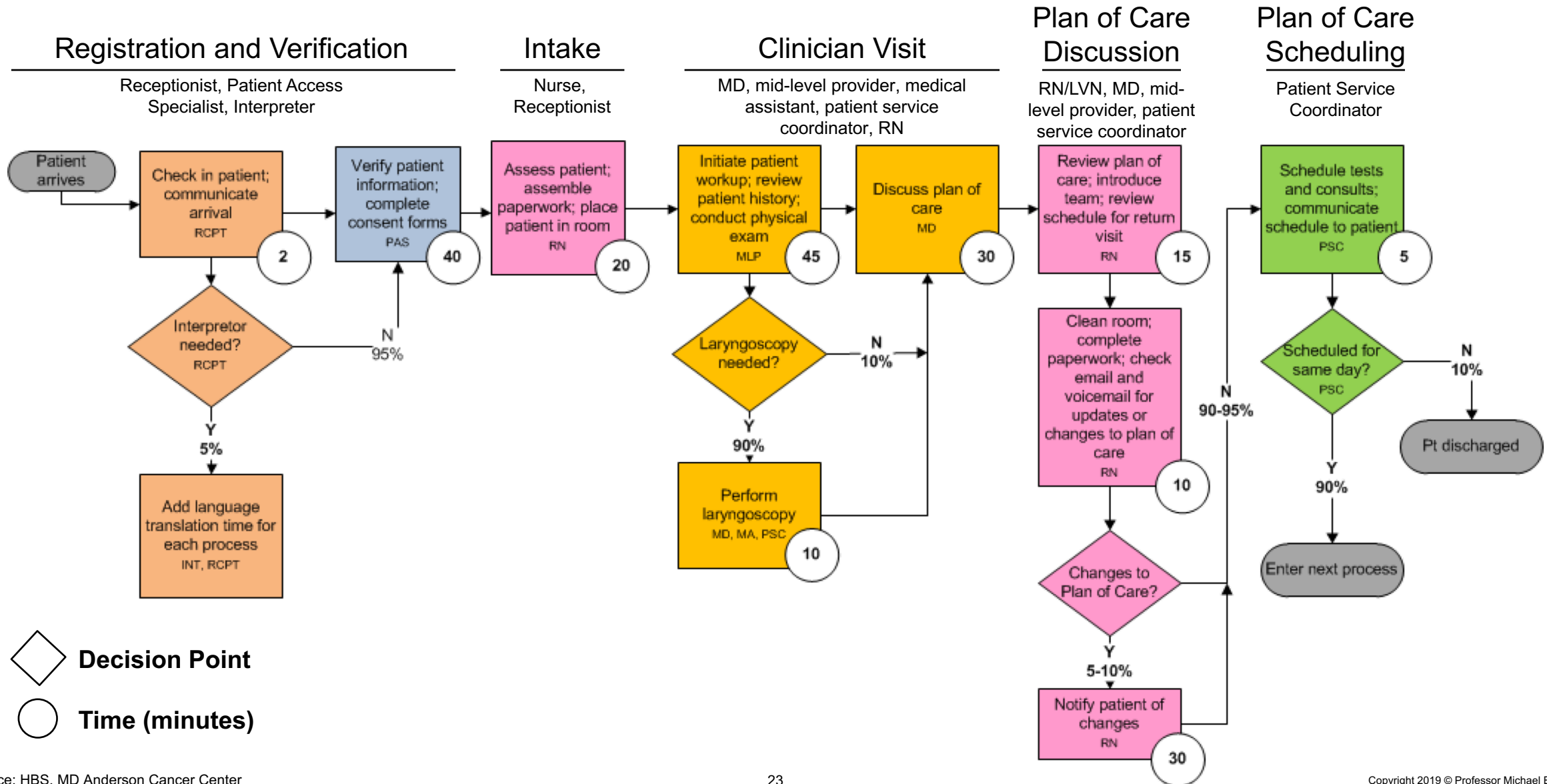
Measure Cost for Every Patient

Principles

- Cost is the **actual expense** of patient care, not the **sum of charges** billed or collected
 - Properly measuring the cost of care requires **different cost accounting** methods than prevailing approaches in health care, such as departmental, charge-based, or RVU-based costing
- 
- Cost should be measured for **each patient by condition**, over the **full cycle of care**
 - Cost is created by the use of **the resources** involved in a patient's care (people, facilities, supplies, and support services)
 - Cost depends on **time** and actual **costs** of resource use, not arbitrary allocations
 - Understanding costs requires **mapping the care process**

Mapping Resource Utilization

MD Anderson Cancer Center – New Patient Visit



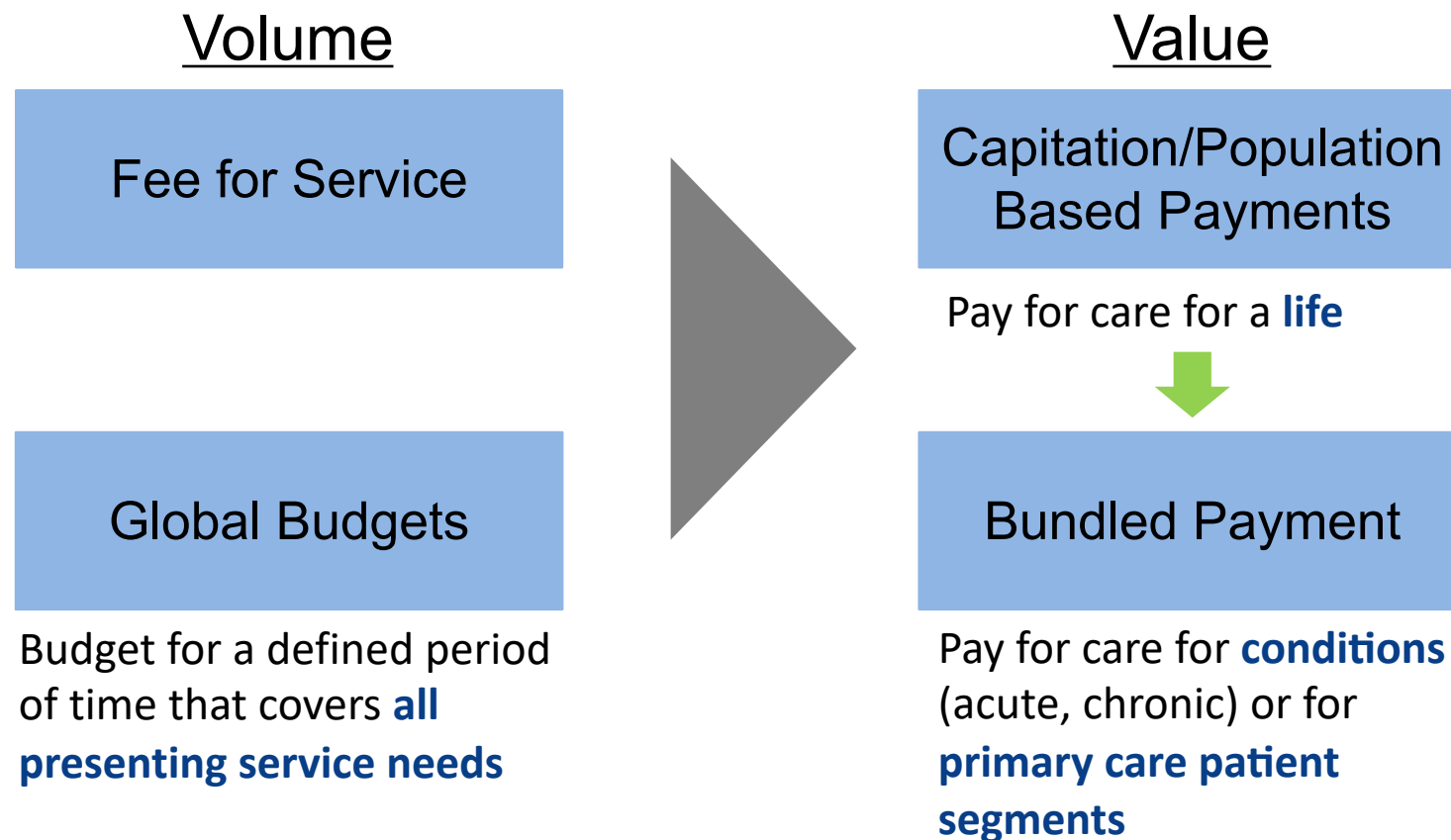
Major Cost Reduction Opportunities in Health Care

- Utilize **physicians and skilled staff** at the top of their licenses (people ~65% of costs)
- Reduce **process variation** that increases complexity and raises cost
- Eliminate **low-** or **non-value added** services or tests
- **Reduce cycle times** across the care cycle, which **expands capacity**
- Invest in additional services (e.g. extra visits, telemedicine), or higher costs inputs that will **lower overall care cycle cost**
- Reduce **service duplication** and **volume fragmentation** across sites
- Rationalize redundant **administrative** and **scheduling** units
- Move uncomplicated services **out of highly-resourced** facilities
- Increase **cost awareness** in clinical teams, (e.g. costs of inputs (sutures vs. staples))
- Improve the efficiency and automation of **claims management** and **billing** processes
- The number one way to reduce costs is through **better outcomes**
- Many cost improvements also **improve outcomes**



- Our work with numerous providers reveals typical **cost reduction opportunities of 30+%**

Move to Value-Based Payment Models

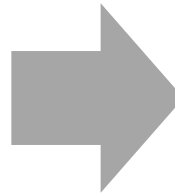


- Both approaches create positive incentives for **reducing costs** and **separate payment** from performing particular services
- Capitation at the hospital or system level can **coexist** with bundle payment at the condition level

Emerging Value-Based Payment Models

Capitation (Population-Based)

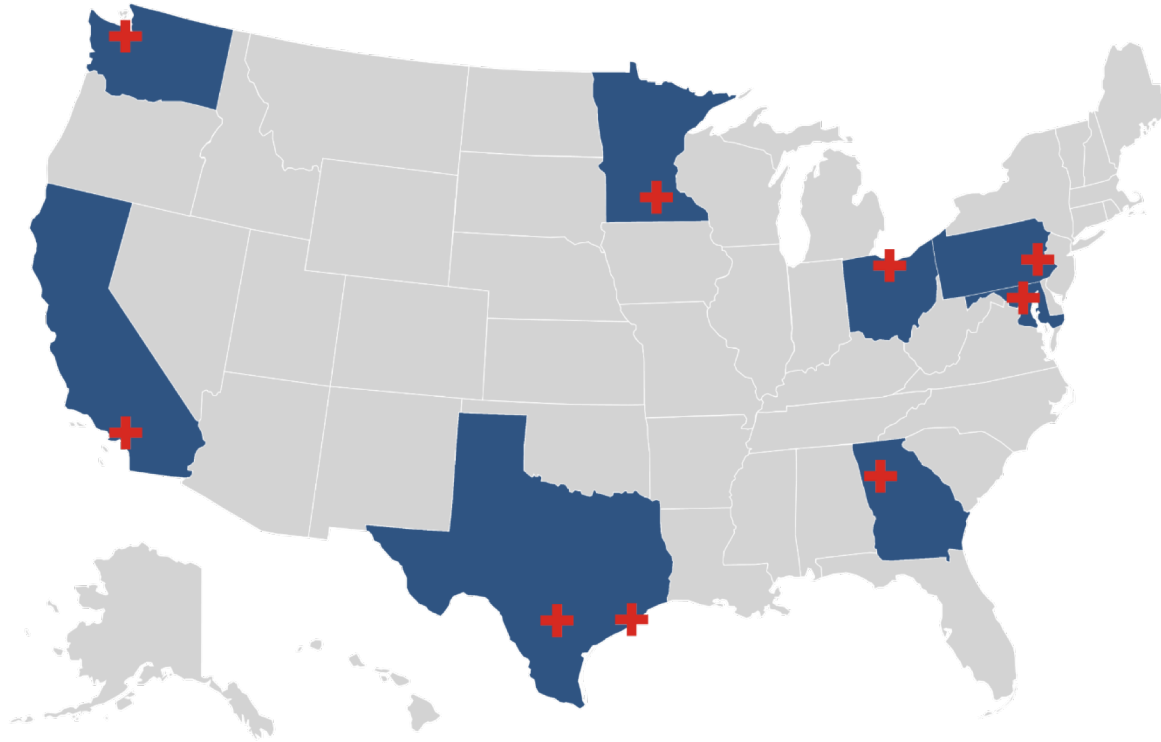
- A single risk-adjusted payment for the overall care for a **life**
- Responsible for **all needed care** in the covered population
- Accountable for **population level quality metrics**
- At risk for the difference between the **sum of payments** for the population and **overall spending**
 - **Providers** take on **disease incidence risk**, not just **execution/outlier risk**
- Accountable for **overall cost** and **population level** quality measures



Bundled Payment

- A single risk adjusted payment for the overall care for a **condition**
 - **Not** for a specialty, procedure, or short episode
- Covers the **full set** of services needed **over an acute care cycle**, or a **defined time period** for chronic care or primary care
- Contingent on **condition-specific outcomes**
 - Including responsibility for avoidable **complications**
- At risk for the difference between the **bundled price** and the **actual cost** of all included services
 - **Limits of responsibility** for unrelated care and outliers
- Accountable for costs and outcomes **patient by patient**, and **condition by condition**

Bundled Payments: Walmart Centers of Excellence



Partnerships:

Cleveland Clinic (OH)

Geisinger (PA)

Kaiser Permanente (CA)

Johns Hopkins (MD)

Mayo Clinic (MN)

Memorial Hermann (TX)

Northeast Baptist (TX)

Virginia Mason (WA)

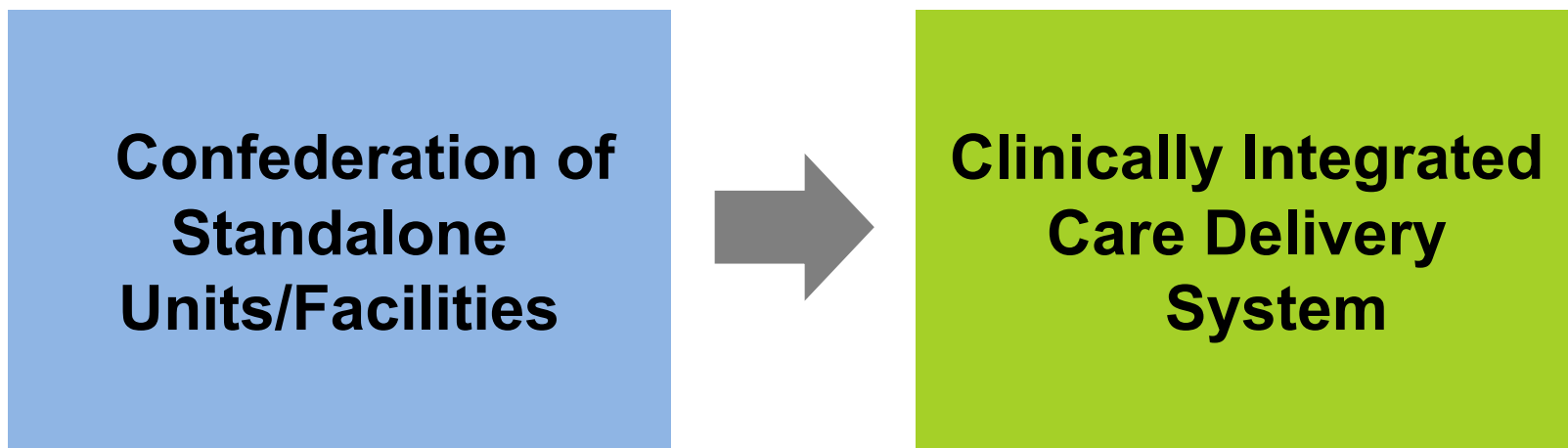
Emory (GA)

Conditions:

- Cardiac Surgery
- Cancer
- Joint replacement
- Spine
- Organ Transplant
- Weight loss

Note: Not all providers participate in every Walmart condition

Shifting The Strategic Logic of Health Systems



- Increase **volume**



- More clout in **contracting** and **purchasing**
- **Spreading** “fixed overhead” costs
- Use **owned or affiliated** primary care practices to “**guarantee**” referrals

- Increase **value**



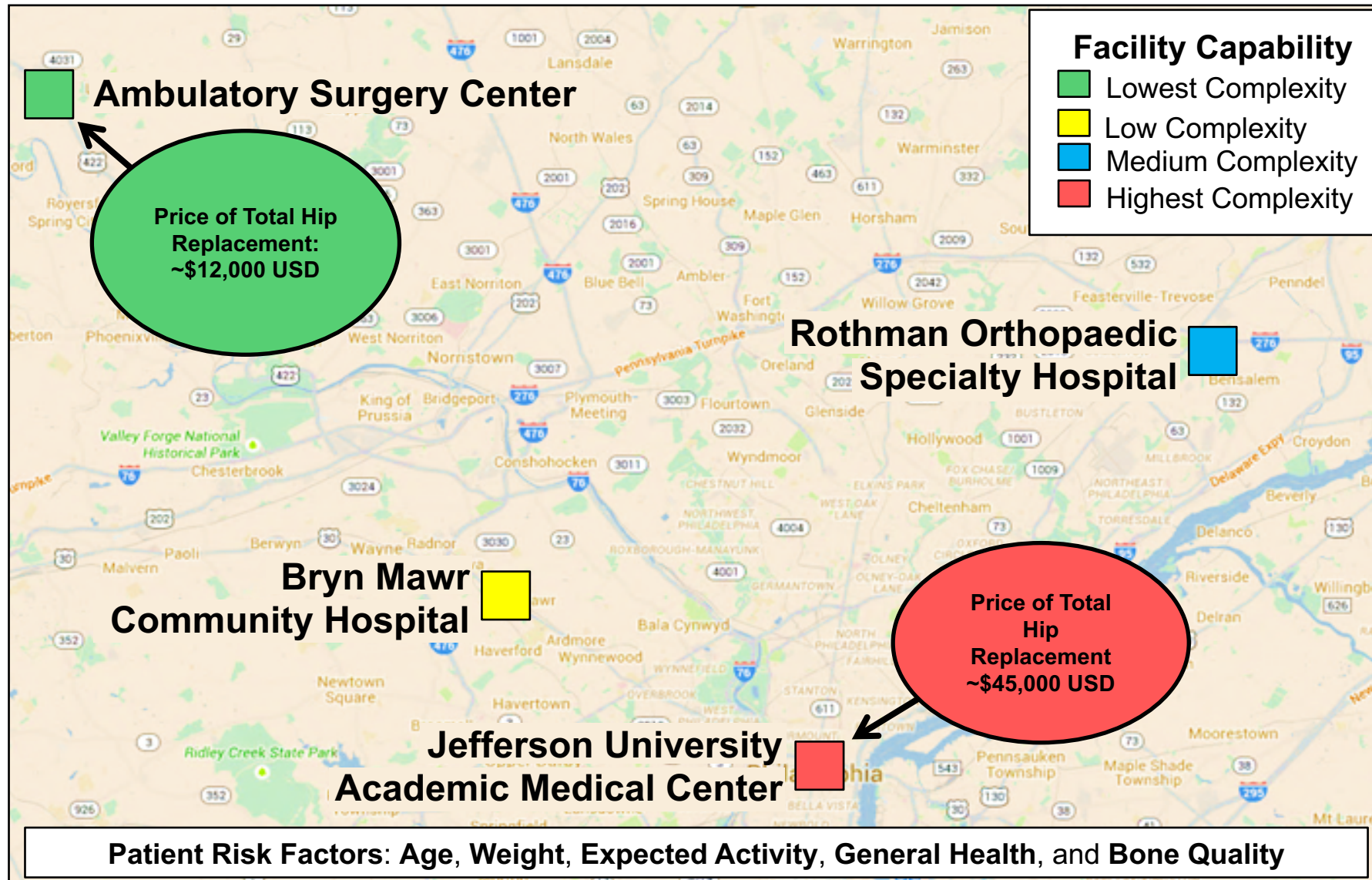
- Value-based **delivery models**
- **Concentrate, allocate, and integrate** care across appropriate sites
- The system is **more than** the sum of its parts

Value and The Geography of Care and Value

- The Traditional Care Geography Model
 - Care organized around **specialties** and **interventions** at each site
 - **Duplication** of services across sites/facilities
 - Sites provide care for **multiple acuity levels**
 - **Limited integration** of care across sites
 - Model reinforced by **fee-for-service** model and **siloed IT systems**
- Geography and Value: Strategic Principles
 - Organize **care by condition** in IPU (the hubs)
 - Multi-disciplinary teams
 - Responsibility for full care cycle
 - IPU **allocate services** across the care cycle to sites based on: site capabilities, care complexity, patient risk, cost, and patient convenience
 - **Incorporating** telemedicine, home services, and affiliated provider sites into the care cycle
 - IPU developing **formal systems** to direct patients to the most appropriate site

Delivering the Right Care at the Right Location

Rothman Institute, Philadelphia



Allocate and Integrate Care Across Sites

Children's Hospital of Philadelphia Care Network



Wholly-Owned Outpatient Units

- ★ Primary Care Practices
- Specialty Care Centers
- Specialty Care Center, Surgery Center & After-Hours Urgent Care
- Specialty Care & Surgery Centers
- Specialty Care Center, Surgery Center, After-Hours Urgent Care & Home Care

Community Inpatient Partnerships

- CHOP Newborn Care
- CHOP Pediatric Care
- CHOP Newborn & Pediatric Care
- ▲ Hospital & Integrated Specialty Program

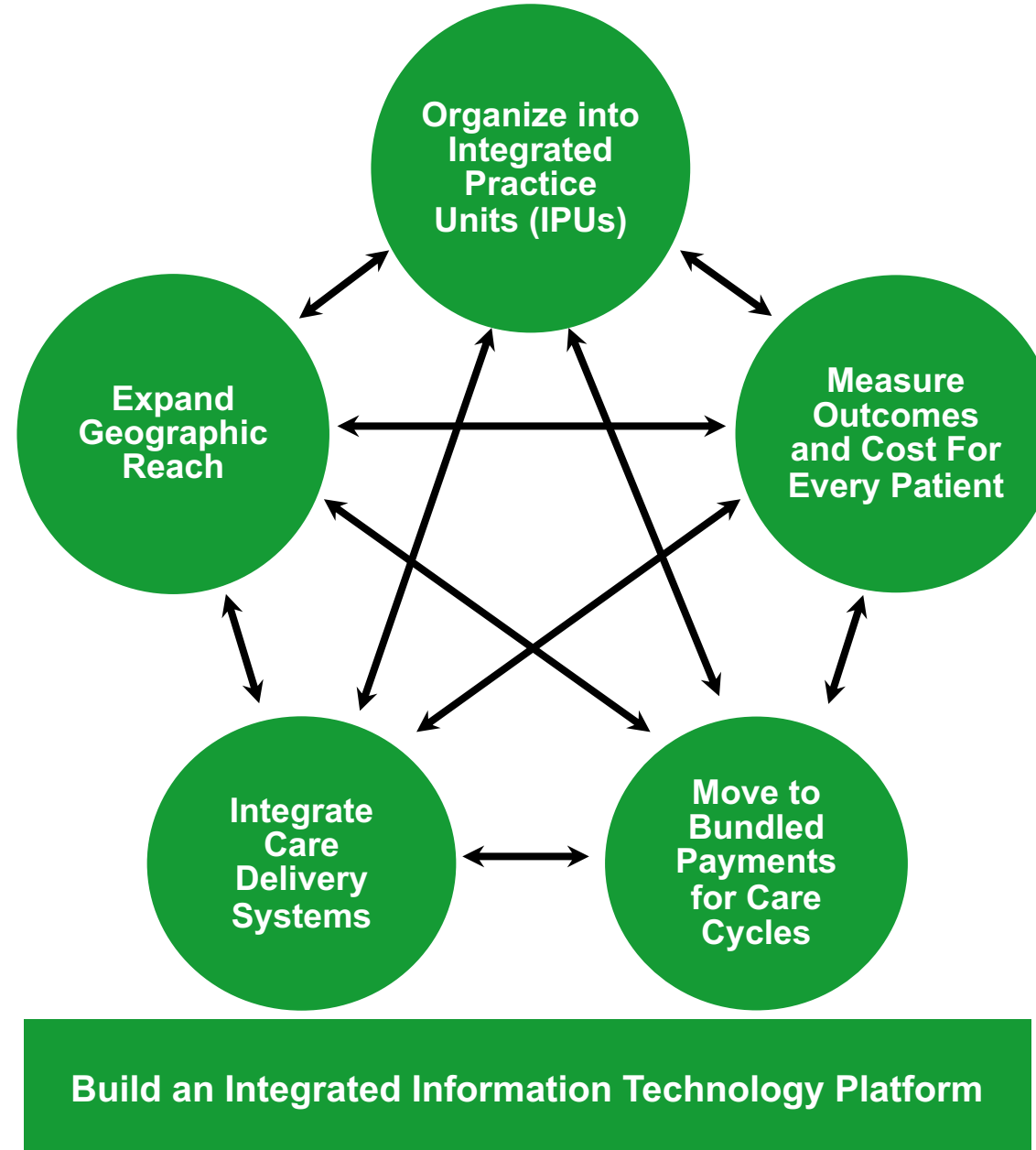


Build an Enabling IT Platform

Attributes of a Value-Based IT Platform

1. Combines **all types of data** for each patient's condition across the full care cycle (notes, lab tests, imaging, costs) using standard definitions and terminology
2. Tools to capture, store, and extract **structured data** and eliminate **free text**
3. Data is captured in the **clinical** and **administrative workflow**
4. Data is stored and easily extractable from a common warehouse. Capability to **aggregate**, **extract**, **run analytics** and display **data by condition** and **over time**
5. Platform is structured to enable the capture and aggregation of **outcomes**, **costing** parameters, and **bundled payment** eligibility/billing
6. Leverages **mobile technology** for scheduling, PROMs collection, secure patient communication and monitoring, virtual visits, access to clinical notes, and patient education
7. **Full interoperability** allowing data sharing within and across networks, EMR platforms, referring clinicians, and **health plans**

A Mutually Reinforcing Strategic Agenda



The Health Care Transformation is Well Underway

- We **know the path** forward
- **Value for patients** is True North
- **Value based thinking** is restructuring care organization, outcome measurement, payment models, and **health system strategy**
- **Standardized outcome measure sets** and new **costing practices** are beginning to accelerate value improvement
- **Employers**, **suppliers**, and **insurers** can be the next accelerators
- **Government policy** is beginning to reinforce value improvement in many countries



- We are excited to **work with all** of you in accelerating this transformation
- We **invite** every one of you to get started on this path

NEJM Catalyst Innovations in Care Delivery is a new digital, peer-reviewed journal from NEJM Group, the publisher of The New England Journal of Medicine.

Publishing six issues each year, NEJM Catalyst Innovations in Care Delivery aims to accelerate health care delivery transformation by publishing real-world examples and practical solutions so that health care leaders can address today's urgent care delivery challenges and shape the future of health care delivery across the globe.

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Co-Chair and Editor-in-Chief —
Tom Lee, MD, MSc, Chief Medical Officer, Press Ganey; Professor, Harvard Medical School, TH Chan School of Public Health; Internist, Brigham & Women's Hospital



Co-Chair —
Michael Porter, PhD, Bishop William Lawrence University Professor, Harvard Business School

Quick Facts:

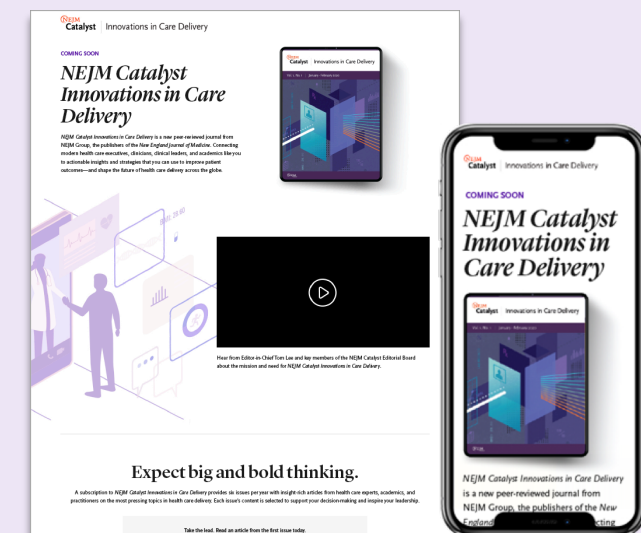
Frequency: Bimonthly (6x/year)

Launch Date: January 2020

Format: Online only

Indexed: Anticipate indexing in PubMed and MEDLINE

Audience: Health care executives, clinical leaders, clinicians, academics, industry analysts, consultants, policy makers, government officials





American College of Surgeons



HARVARD
BUSINESS SCHOOL

ACSTHRIVE

TRANSFORMING
HEALTH CARE
RESOURCES TO
INCREASE
VALUE &
EFFICIENCY

Project Overview

Implement comparable outcome and cost measurement sets in select conditions at leading providers throughout the U.S. and create risk adjusted benchmarks to generate systems improvement and reward high value providers

Conditions

- 3 Surgical Conditions
 - Colon Cancer
 - Breast Cancer
 - Obesity
- Full cycle of care (including key surgical, medical, behavioral and social elements of care)

Sites

- 10-15 Sites per condition
- Leading Centers of Excellence across the U.S.

Measurement

- Measure ICHOM outcomes sets and cost at the condition level
- Create the playbook for implementation
- Develop scalable approach for risk adjusted benchmarking and systems improvement
- Inform value-based payments

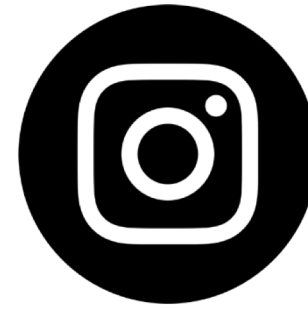
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